

CLAIMS

What is claimed is:

- 5 1. A powered tonneau cover actuator, comprising:
a track;
a trolley adapted for sliding engagement with the track and adapted to
traverse at least a portion of the length of the track;
a lift arm pivotally coupled to a tonneau cover at a first end and the trolley at
10 a second end; and
a drive apparatus adapted to translate the trolley along the track.
2. The powered tonneau cover actuator of claim 1, wherein the drive apparatus
comprises a linear actuator, comprising:
15 an drive rod having a rod end adapted to couple with the trolley;
a housing adapted to contain at least a portion of the drive rod in a retracted
position; and
a motor adapted to engage the drive rod to extend and retract at least a
portion of the drive rod out of and into the housing.
- 20 3. The powered tonneau cover actuator of claim 2, wherein the drive rod is a
solid rod.
4. The powered tonneau cover actuator of claim 2, wherein the drive rod
25 comprises telescoping sections.
5. The powered tonneau cover actuator of claim 1, further comprising a
wireless, remotely controlled switch adapted to operate the drive apparatus.

6. The powered tonneau cover actuator of claim 1, wherein the drive apparatus comprises:

a hydraulic piston, the hydraulic piston coupled to the trolley and adapted to impart forward and reverse motion thereto from a first to a second position.

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7. The powered tonneau cover actuator of claim 1, wherein the drive apparatus is adapted to stop and hold the trolley in a position along the track when the drive apparatus is not in operation.

10 8. A powered tonneau cover actuator for power-assisted opening and closing of a tonneau cover, the tonneau cover covering an area of a vehicle bounded by spaced walls, the walls comprising a front panel, a rear panel opposite the front panel, and parallel side panels, the tonneau cover pivotally coupled at the front panel by a hinge, comprising:

15 a track coupled to the inside surface of a side panel adjacent the rear panel distal to the hinge, the track extending at an upward angle to the horizontal and toward the hinge;

a trolley adapted for sliding engagement with the track and adapted to traverse at least a portion of the length of the track;

20 a lift arm pivotally coupled to the tonneau cover at one end and the trolley at the other end; and

a drive apparatus adapted to translate the trolley to and from a lower position distal from the hinge wherein the lift arm closes the cover to a higher position proximal the hinge wherein the lift arm opens the cover.

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9. The powered tonneau cover actuator of claim 8, wherein the drive apparatus comprises a linear actuator, comprising:

an drive rod having a rod end adapted to couple with the trolley;

5 a housing adapted to contain at least a portion of the drive rod in a retracted position; and

a motor adapted to engage the drive rod to extend and retract the drive rod out of and into the housing from a first position distal to the hinge wherein the cover is lowered, to a second position proximal to the hinge wherein the cover is pivoted about the hinge in an upward direction.

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10. The powered tonneau cover actuator of claim 9, further comprising a wireless, remotely controlled switch, the switch adapted to operate the motor.

11. The powered tonneau cover actuator of claim 9, wherein the track extends at
15 an upward angle in the range from 15 to 45 degrees to the horizontal and toward the hinge.

12. The powered tonneau cover actuator of claim 9, wherein the drive apparatus is adapted to hold the cover in position when not in operation, wherein the cover is
20 securely held in the open position and prevented from closing, and wherein the cover is securely held in the closed position and prevented from opening.

13. The powered tonneau cover actuator of claim 9, wherein the drive rod is a solid rod.

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14. The powered tonneau cover actuator of claim 9, wherein the drive rod comprises telescoping sections adapted to nest when retracted.